

IN THE CLAIMS:

Please cancel claims 1- 29 without prejudice or disclaimer.

Claims 1-29 (Cancelled).

Please enter the following new claims:

30. (New) A control signal processing system for responsively generating MIDI control signals, said system comprising:
- an incoming control signal interface adapted to receive an incoming MIDI control signal;
 - a controllable low frequency oscillator comprising at least one parameter, said at least one parameter comprising a value selectable from a plurality of values, wherein said value of said at least one parameter is determined by said incoming MIDI control signal, and wherein said controllable low frequency oscillator is adapted to generate an outgoing MIDI control signal responsive to said value of said at least one parameter; and
 - an outgoing control signal interface adapted to communicate said outgoing MIDI control signal.
31. (New) The system according to claim 30, wherein frequency of said controllable low frequency oscillator is controlled by said value of said at least one parameter.
32. (New) The system according to claim 30, wherein a waveform of said controllable low frequency oscillator is controlled by said value of said at least one parameter.

33. (New) The system according to claim 30, further comprising:
a plurality of controllable low frequency oscillators, each comprising at least one parameter, wherein said at least one parameter, for each of said plurality of controllable low frequency oscillators, comprises a value selectable from a plurality of values, wherein said value of said at least one parameter is determined by said incoming MIDI control signal, and wherein each of said plurality of controllable low frequency oscillators is adapted to generate a separate outgoing MIDI control signal responsive to said at least one parameter.

34. (New) The system according to claim 33, wherein one of said plurality of controllable low frequency oscillators is a master low frequency oscillator.

35. (New) The system according to claim 34, wherein at least one of said plurality of controllable low frequency oscillators is a slave low frequency oscillator producing an oscillation that is driven by said master low frequency oscillator.

36. (New) The system according to claim 35, wherein said slave low frequency oscillator produces an oscillation that is phase shifted.

37. (New) The system according to claim 35, wherein said slave low frequency oscillator produces a waveform that is different from a waveform that is produced by said master low frequency oscillator.

38. (New) The system according to claim 35, wherein phase of said slave low frequency oscillator is controlled by said value of said at least one parameter.

39. (New) The system according to claim 35, wherein frequency of said master low frequency oscillator is controlled by said value of said at least one parameter.

40. (New) A control signal processing system for responsively generating MIDI control signals, said system comprising:

an incoming control signal interface adapted to receive an incoming MIDI control signal;

a controllable envelope generator comprising at least one parameter, said at least one parameter comprising a value selectable from a plurality of values, wherein said value of said at least one parameter is determined by said incoming MIDI control signal, and wherein said controllable envelope generator is adapted to generate an outgoing MIDI control signal responsive to said value of said at least one parameter; and

an outgoing control signal interface adapted to communicate said outgoing MIDI control signal.

41. (New) The system according to claim 40, wherein said controllable envelope generator is a ramp generator.

42. (New) The system according to claim 40, wherein said controllable envelope generator is a transient generator comprising a slew limiter.

43. (New) A method for processing control signals to generate a non-merging mathematical function of values of said control signals, said method comprising:

- obtaining a first control signal value from a first incoming real-time MIDI control signal;
- obtaining a second control signal value from a second incoming MIDI control signal;
- numerically multiplying said first control value and said second control value to produce a multiplied value; and
- generating an outgoing MIDI control signal based upon said multiplied value.

44. (New) The method according to claim 43, wherein prior to said generating, said method further comprising:

- adding an offset to said multiplied value.

45. (New) The method according to claim 44, wherein said offset is determined by a third incoming MIDI control signal.

46. (New) A method for processing control signals to generate a non-merging mathematical function of values of said control signals, said method comprising:

- obtaining a first control signal value from a first incoming real-time MIDI control signal;
- obtaining a second control signal value from a second incoming MIDI control signal;
- numerically adding said first control value and said second control value to produce a summed value; and
- generating an outgoing MIDI control signal based upon said summed value.

47. (New) The method according to claim 46, wherein prior to said generating, said method further comprising:

multiplying said summed value by a scaling value.

48. (New) The method according to claim 47, wherein said scaling value is determined by a third incoming MIDI control signal.

49. (New) A method for generating an outgoing control signal, said method comprising:

receiving a first incoming MIDI control signal comprising a first event and a first control signal value;

receiving a second incoming MIDI control signal comprising a second event and a second control signal value;

identifying a temporal sequence of said first and second events of said first and second incoming MIDI control signals;

obtaining a first control signal value from a first incoming MIDI control signal;

obtaining a second control signal value from a second incoming MIDI control signal; and

generating an outgoing MIDI control signal comprising an output value determined by a combination of said temporal sequence, said first control signal value, and said second control signal value.

50. (New) The method according to claim 49, wherein
said first incoming MIDI control signal comprises a plurality of first events and a
plurality of first control signal values; and wherein
said second incoming MIDI control signal comprises a plurality of second events and a
plurality of second control signal values, said method further comprising:
identifying a temporal sequence of said plurality of first and second events of said first
and second incoming MIDI control signals; and
generating said outgoing MIDI control signal comprising said output value determined by
said temporal sequence of said plurality of first and second events, said first control signal value,
and said second control signal value.

51. (New) A method for processing real-time MIDI control signals, said method
comprising:
receiving an incoming real-time MIDI note event control signal;
obtaining a MIDI note number value from said incoming real-time MIDI note event
control signal;
changing said MIDI note number value to a MIDI continuous controller value; and
generating an outgoing real-time MIDI control signal comprising said MIDI continuous
controller value.

52. (New) A method for processing real-time MIDI control signals, said method comprising:

- receiving an incoming real-time MIDI note event control signal;
- obtaining a MIDI note velocity value from said incoming real-time MIDI note event control signal;
- changing said MIDI note velocity value to a MIDI continuous controller value; and
- generating an outgoing real-time MIDI control signal comprising said MIDI continuous controller value.

53. (New) A method for processing real-time MIDI control signals, said method comprising:

- receiving an incoming real-time MIDI continuous controller control signal;
- obtaining a MIDI continuous controller value from said incoming real-time MIDI continuous controller control signal;
- changing said MIDI continuous controller value to a MIDI note value; and
- generating an outgoing real-time MIDI note event control signal comprising said MIDI note value.

54. (New) A method for processing real-time MIDI control signals, said method comprising:

receiving an incoming real-time MIDI continuous controller control signal;

obtaining a MIDI continuous controller value from said incoming real-time MIDI continuous controller control signal;

multiplying said MIDI continuous controller value with a scale value; and

generating an outgoing real-time MIDI control signal comprising said MIDI continuous controller value multiplied by said scale value.

55. (New) A method for processing real-time MIDI control signals, said method comprising:

receiving an incoming real-time MIDI continuous controller control signal;

obtaining a MIDI continuous controller value from said incoming real-time MIDI continuous controller control signal;

adding an offset to said MIDI continuous controller value; and

generating an outgoing real-time MIDI control signal comprising said MIDI continuous controller value and said added offset.

56. (New) A method for processing real-time MIDI control signals, said method comprising:

receiving an incoming real-time MIDI continuous controller control signal;

obtaining an incoming MIDI continuous controller value from said incoming real-time MIDI continuous controller control signal;

generating an outgoing MIDI continuous controller value having a magnitude which is complementary to said MIDI continuous controller value; and

generating an outgoing real-time MIDI control signal comprising said outgoing MIDI continuous controller value.

57. (New) A method for processing real-time MIDI control signals, said method comprising:

receiving an incoming real-time MIDI note event control signal;

obtaining an incoming MIDI note number value from said incoming real-time MIDI note event control signal;

changing said incoming MIDI note number value to an outgoing MIDI note number value according to a variably transposed intelligent harmony; and

generating an outgoing real-time MIDI note event control signal comprising said outgoing MIDI note number value.

58. (New) The method according to claim 57, said method further comprising:

controlling said variably transposed intelligent harmony using information provided in a second incoming real-time MIDI control signal.

59. (New) The method according to claim 58, wherein said second incoming real-time MIDI control signal is a MIDI note event control signal.

60. (New) The method according to claim 58, wherein said second incoming real-time MIDI control signal is a MIDI continuous controller control signal.